SCIENCE ABSTRACTS.

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SECTION A.—PHYSICS.

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ERRATA.

Section A.—PHYSICS.

Abstract No. 270, line 2: *for* 21, *read* 28.
Abstract No. 272, line 2: *for* 21, *read* 28.
Abstract No. 273, line 2: *for* 21, *read* 28.
Abstract No. 321, line 3: *for* R. Rao, *read* I. R. Rao.
Abstract No. 649, line 8, and on p. 185, line 4: *for* quarter, *read* quartet.
Abstract No. 951, line 3: *for* 1267, *read* 1262.
Abstract No. 979, line 2: *for* 1927, *read* 1928.
Abstract No. 1345, line 3: *for* 30, *read* 3.
Abstract No. 1367, last line on p. 399: *for* with, *read* within.
Abstract No. 1447, line 2: *for* Rosband and Schmidt, *read* Rosbaud and Schmid.
Abstract No. 1514, line 2: *for* Weiner, *read* Wiener.
Abstract No. 1652, line 1: *for* F. Persico, *read* E. Persico.
Abstract No. 1695, line 5: *for* strong, *read* string.
Abstract No. 1782, line 1: *for* Bauer, *read* Baur.
Abstract No. 1836, line 2: *for* J. E. Horowitz, *read* G. E. Horowitz.
Abstract No. 1852, line 1: *for* Wright, *read* Night.
Abstract No. 1903, line 1: *for* M. P. Villard, *read* P. Villard.
Abstract No. 2062, line 2: *for* L. J. Carpenter and L. J. Stoodley, *read* L. G. Carpenter and L. G. Stoodley.
Abstract No. 2156, line 2: *for* E. Ebinger, *read* A. Ebinger.
Abstract No. 2737, line 8: *for* Ro . Kα_1(λ = 708·05 Å.), *read* Mo . Kα_1(λ =708·05Å.).
Abstract No. 2933, line 1: *for* azone, *read* ozone.
Abstract No. 3165, line 4: *for* presses, *read* passes.
Abstract No. 3303, line 7: *for* voltmeter, *read* voltameter.
Abstract No. 3307, line 8: *for* vibrator, *read* vibrations.

EDITOR.

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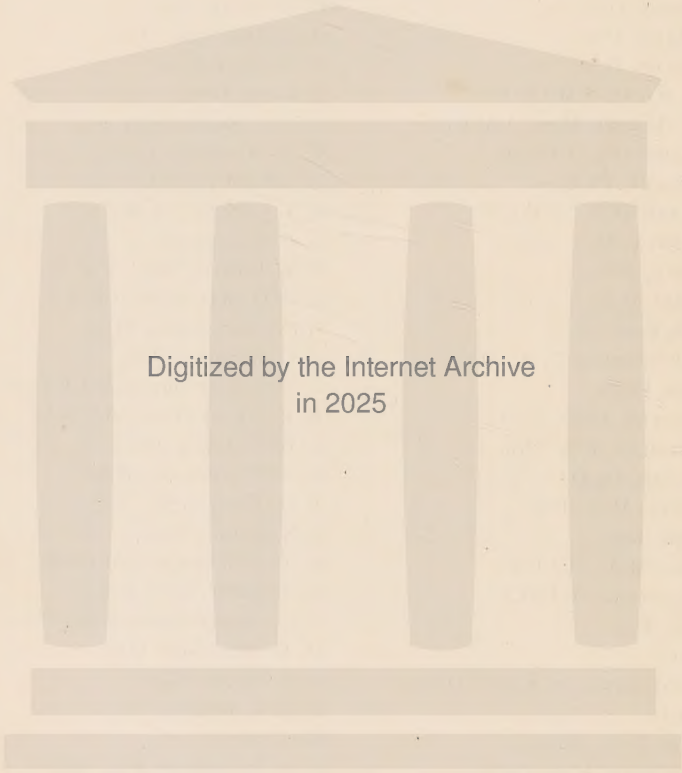

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LIST OF JOURNALS AND THEIR ABBREVIATIONS

An asterisk (*) indicates that the Journals so marked are received only occasionally.

Abbreviation.	Full Title and Publisher.
Acad. Polonaise Sci. et Lettres, Bull.	Bulletin Internationale de l'Académie Polonaise des Sciences et des Lettres. Gebethner et Wolff, Rynek Gl., Cracovie, Poland.
Accad. Lincei, Atti	Atti della Reale Accademia Nazionale dei Lincei. Dott. Giovanni Bardi, Piazza Madama, 19–20, Rome (III), Italy.
Accad. Sci. Torino, Atti	Atti della Reale Accademia delle Scienze di Torino. Libreria Fratelli Bocca, Via Carlo Alberto 3, Turin, Italy.
A.C.E.C.	Ateliers de Constructions Électriques de Charleroi. Route de Philippeville, Charleroi, Belgium.
A.E.G.Mitt	AEG Mitteilungen. A.E.G., Friedrich-Karl-Ufer 2–4, Berlin N.W. 40.
Akad. Wiss. Wien, Ber.	Sitzungsberichte der Akademie der Wissenschaften in Wien. Mathematisch-naturwissenschaftliche Klasse. Universitätsplatz, 2, Vienna, 1, Austria.
Am. Acad., Proc.	Proceedings of the American Academy of Arts and Sciences. 28, Newbury Street, Boston, Mass., U.S.A.
Am. Chem. Soc., J.	The Journal of the American Chemical Society. Mills Building, Washington, D.C., U.S.A.
Am. Electrochem. Soc., Trans.	Transactions of the American Electrochemical Society. Lehigh University, Bethlehem, Pa., U.S.A.
A.I.E.E., J.	Journal of the American Institute of Electrical Engineers. 33, West 39th Street, New York, U.S.A.
Am. Illum. Eng. Soc., Trans.	Transactions of the American Illuminating Engineering Society. Publication Office, Easton, Pa., U.S.A.
Am. J. Sci.	American Journal of Science. New Haven, Conn., U.S.A.
Am. Phil. Soc., Proc.	Proceedings of the American Philosophical Society. 104, South Fifth Street, Philadelphia, Pa., U.S.A.
Ann. de Physique	Annales de Physique. Masson et Cie, Libraires de l'Academie de Médecine, 120, Boulevard St. Germain, Paris (VI^{e}).
Ann. d. Physik	Annalen der Physik. J. A. Barth, Salomonstrasse 18B, Leipzig, Germany.
Ann. Soc. Sci. de Bruxelles	Annales de la Société Scientifique de Bruxelles. 11, Rue des Récollets, Louvain, Belgium.
Annales des P.T.T.	Annales des Postes, Télégraphes et Téléphones. Librairie de l'Enseignement Technique, 3, Rue Thénard, Paris (V^{e}).
Arch. des Sciences	Archives des Sciences Physiques et Naturelles. Institut de Physique de l'Université, Geneva, Switzerland.

Abbreviation.	Full Title and Publisher.
Arch. f. Elektrot	Archiv für Elektrotechnik. J. Springer, Linkstrasse, 23–24, Berlin, W. 9.
Arkiv. f. Mat., Astron. och Fysik, Stockholm	Arkiv för Matematik, Astronomi och Fysik, Stockholm. Académie Royale des Sciences, Stockholm 50, Sweden.
A.S.E.A., J.	Allmanna Svenska Elektriska A.B. ASEA, Vesteras, Sweden.
Assoc. Ing. El. Liége, Bull.	Bulletin de l'Association des Ingénieurs Electriciens sortis de l'Institut Électrotechnique Montefiore. 31, Rue Saint-Gilles, Liége, Belgium.
Astron. Iakttagelser Undersökning., Stockholm	Astronomiska Iakttagelser och Undersökningar å Stockholms Observatorium. Académie Royale des Sciences, Stockholm 50, Sweden.
Astron. J.	The Astronomical Journal. Dudley Observatory, Albany, N.Y., U.S.A.
Astrophys. J.	The Astrophysical Journal. The University of Chicago Press, Chicago, Illinois, U.S.A.
Bell System Techn. J.	Bell System Technical Journal. American Telephone and Telegraph Co., 195, Broadway, New York, U.S.A.
Brit. J. of Radiology	British Journal of Radiology. William Heinemann (Medical Books), Ltd., 99, Great Russell Street, London, W.C. 1.
Brown Boveri Rev.	The Brown Boveri Review. British Brown Boveri, Ltd., Trafalgar House, Waterloo Place, London, S.W. 1.
Bull. Astronomique	Bulletin Astronomique. Gauthier-Villars et Cie, 55, Quai des Grands-Augustins, Paris.
Bull. Oerlikon	Bulletin Oerlikon. Oerlikon, Ltd., 28–31, Essex Street, Strand, London, W.C. 2.
Bureau of Mines, Techn. or Sci. Papers	Technical or Scientific Papers of the Bureau of Mines, U.S. Department of Commerce. Superintendent of Documents, Government Printing Office, Washington, D.C., U.S.A.
Bureau of Standards, Sci., Technol., or Research Papers	Scientific, Technologic, or Research Papers of the Bureau of Standards. Government Printing Office, Washington, U.S.A.
Calcutta Math. Soc., Bull.	Bulletin of the Calcutta Mathematical Society. Bowes & Bowes, 1, Trinity Street, Cambridge, England.
Cambridge Phil. Soc., Proc.	Proceedings of the Cambridge Philosophical Society. Cambridge University Press, Fetter Lane, London, E.C. 4.
Cambridge Phil. Soc., Trans.	Transactions of the Cambridge Philosophical Society. Cambridge University Press, Fetter Lane, London, E.C. 4.
Chem. and Met. Eng.	Chemical and Metallurgical Engineering. McGraw Hill Publishing Co., Inc., Tenth Avenue at 36th Street, New York, U.S.A.
Chem. Soc., J.	Journal of the Chemical Society. Burlington House, Piccadilly, London, W. 1.
Chem. Soc. Japan, Bull.	Bulletin of the Chemical Society of Japan. Faculty of Science, Imperial University of Tokyo, Japan.
Colliery Guardian	The Colliery Guardian. 30 and 31, Furnival Street, Holborn, London, E.C. 4.
Comptes Rendus	Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences. Gauthier-Villars et Cie, 55, Quai des Grands Augustins, Paris.
Dept. Sci. & Indust. Research, Publ.	Publications of the Department of Scientific and Industrial Research. 16, Old Queen Street, Westminster, London, S.W. 1.
Dominion Astrophys. Obs. Victoria, Publ.	Publications of the Dominion Astrophysical Observatory, Victoria. Victoria, B.C., Canada.

Abbreviation.	Full Title and Publisher.
Elect. Communication	Electrical Communication. International Standard Electrical Corporation, 41, Broad Street, New York, U.S.A.; and Connaught House, Aldwych, London, W.C. 2.
Elect. J.	The Electric Journal. Westinghouse Club, 1205, Keenan Building, Pittsburgh, Pa., U.S.A.
Elect. News, Toronto (formerly: Canad. Elect. News)	Electrcal News, Toronto. Hugh C. MacLean Publications, Ltd., 347, Adelaide Street West, Toronto 2, Canada.
El. Rev.	The Electrical Review. 4, Ludgate Hill, London, E.C. 4.
El. Rly., Bus and Tram J.	The Electric Railway, Bus, and Tram Journal. 37 and 38, Strand, London, W.C. 2.
El. Times	The Electrical Times. Sardinia House, Kingsway, London, W.C. 2.
El. World	Electrical World. McGraw Hill Publishing Co., Inc., Tenth Avenue at 36th Street, New York, U.S.A.
Electrician	The Electrician. Bouverie House, Fleet Street, London, E.C. 4.
Electrot. Laborat. Tokyo, Japan, Circ.	Circulars of the Electrotechnical Laboratory, Tokyo, Japan. Electrotechnical Laboratory, Ministry of Communications, Tokyo, Japan.
Electrot. Laborat. Tokyo, Japan, Researches	Researches of the Electrotechnical Laboratory. Electrotechnical Laboratory, Ministry of Communications, Tokyo, Japan.
Elek. Betrieb	REA Der Elektrische Betrieb. Georg Siemens, Kurfürstenstrasse 8, Berlin, W. 57.
E.N.T.	Elektrische Nachrichten-technik. Dr. K. W. Wagner, Güntzelstrasse 9, Wilmersdorf, Berlin.
Elek. im. Bergbau	Elektrizität im Bergbau. Dr. W. Philippi, Burgunderstrasse 12, Berlin.
E.u.M.	Elektrotechnik und Maschinenbau, Theobaldgasse 12, Vienna. 6, Austria.
Elettrotecnica	L'Elettrotecnica. Giornale ed Atti dell' Associazione Elettrotecnica Italiana. Via Annunciata, 4, Milan, Italy.
Engineer	The Engineer. 33, Norfolk Street, Strand, London, W.C. 2.
Engineering	Engineering, 35 and 36, Bedford Street, Strand, London, W.C. 2.
E.T.Z.	Elektrotechnische Zeitschrift. J. Springer, Linkstrasse 23–24, Berlin, W. 9.
Experimental Wireless	Experimental Wireless and the Wireless Engineer. Iliffe & Sons, Ltd., Dorset House, Tudor Street, London, E.C. 4.
Faculty of Sci. Tokyo, J.	Journal of the Faculty of Science, Tokyo, Imperial University of Tokyo, Tokyo, Japan.
Faraday Soc., Trans.	Transactions of the Faraday Society. Gurney & Jackson, 33, Paternoster Row, London.
Frank. Inst., J.	Journal of the Franklin Institute. Franklin Institute of the State of Pennsylvania, 15, South 7th Street, Philadelphia, Pa., U.S.A.
Gen. El. Rev.	General Electric Review. General Electric Co., Schenectady, New York, U.S.A.
Geofysiske Publ.	Geofysiske Publikasjoner. Direcktor Th. Hesselberg, Det Norske Meteorologiske Institutt, Oslo, Norway.
Harvard Coll. Obs., Bull.	Bulletin of the Harvard College Observatory. Cambridge, Mass., U.S.A.
Harvard Coll. Obs., Circ.	Circular of the Harvard College Observatory. Cambridge, Mass., U.S.A.

Abbreviation.	Full Title and Publisher.
Illum. Eng., London	The Illuminating Engineer. The Journal of Good Lighting. 32, Victoria Street, London, S.W. 1.
Imp. Acad. Tokyo, Proc.	Proceedings of the Imperial Academy of Tokyo. Ueno Park, Tokyo, Japan.
Imp. Marine Obs., Kobe, Japan, Mem.	Memoirs of the Imperial Marine Observatory, Kobe, Japan.
Indian Journ. Phys.	Indian Journal of Physics and Proceedings of the Indian Association for the Cultivation of Science. 210, Bow-Bazaar Street, Calcutta, India.
Indust. and Engin. Chem.	Industrial and Engineering Chemistry. American Chemical Society. C. L. Parsons, Mills Building, Washington, D.C., U.S.A.
Ingegnere	L'Ingegnere. Rivista Tecnica del Sindacato Nazionale Fascista Ingegneri. Via Vivaio, 17, Milan (113), Italy.
Inst. Civ. Eng., Proc.	Proceedings of the Institution of Civil Engineers. Great George Street, Westminster, London, S.W. 1.
I.E.E., J.	Journal of the Institution of Electrical Engineers. Savoy Place, Victoria Embankment, London, W.C. 2.
Inst. El. Eng. of Japan, J.	The Journal of the Institute of Electrical Engineers of Japan. Denki-Gakkwai, No. 5, 1-Chôme, Yûraku-chô Kôjimachi-ku, Tokyo, Japan.
Inst. Eng. and Shipbuilders, Trans.	Transactions of the Institution of Engineers and Shipbuilders in Scotland. Elmbank Crescent, Glasgow, Scotland.
Inst. Mech. Eng., Proc.	The Proceedings of the Institution of Mechanical Engineers. Storey's Gate, St. James's Park, London, S.W. 1.
Inst. Naval Architects, Trans.	Transactions of the Institution of Naval Architects. 5, Adelphi Terrace, London, W.C. 2.
Inst. of Metals, J.	Journal of the Institute of Metals. 36, Victoria Street, London, S.W. 1.
Inst. Phys. and Chem. Research, Tokyo, Sci. Papers	Scientific Papers of the Institute of Physical and Chemical Research. Iwanami Shoten, 16, Minamijimbocho, Kandaku, Tokyo, Japan.
Inst. Post Office El. Eng., Papers	The Institution of Post Office Electrical Engineers, Selected Papers. General Post Office, Alder House, London, E.C. 1.
I.R.E., Proc.	Proceedings of the Institute of Radio Engineers. 450–454, Ahnaip Street, Menasha, Wis., U.S.A.
Iron and Steel Inst., J.	Journal of the Iron and Steel Institute. 28, Victoria Street, London, S.W. 1.
Japanese Journ. Chem.	The Japanese Journal of Chemistry. National Research Council of Japan, Tokyo, Japan.
Japanese Journ. Math.	The Japanese Journal of Mathematics. National Research Council of Japan, Tokyo, Japan.
J. Inst. F.	Journal of the Institute of Fuel. 53, Victoria Street, London, S.W. 1.
J. Math. Phys., Mass. Inst. of Technology	Journal of Mathematics and Physics, Massachusetts Institute of Technology. Massachusetts, U.S.A.
J.O.S.A. and R.S.I.	Journal of the Optical Society of America and Review of Scientific Instruments. George Banta Publishing Co., 450–454, Ahnaip Street, Menasha, Wis., U.S.A.
J. de Physique et le Radium	Le Journal de Physique et le Radium. Société Française de Physique, 12, Place de Laborde, Paris.

Abbreviation.	Full Title and Publisher.
J. Phys. Chem.	Journal of Physical Chemistry. Baker Laboratory, Ithaca, New York, U.S.A.
Journ. Sci. Instruments	Journal of Scientific Instruments. Cambridge University Press, Fetter Lane, London, E.C. 4.
Journ. Télégraph	Journal Télégraphique. Bureau International de l'Union Télégraphique, Berne, Switzerland.
Junior Inst. Eng., J.	Journal of the Junior Institute of Engineers 39, Victoria Street, Westminster, London, S.W. 1.
K. Akad. Amsterdam, Proc.	Proceedings of the Koninklijke Akademie van Wetenschappen te Amsterdam. Amsterdam, Holland.
K. Svenska Vetenskapsakad. Handlingar, Stockholm	Kungl. Svenska Vetenskapsakademiens Handlingar, Stockholm. Wheldon & Wesley, Ltd., 2, 3 and 4, Arthur Street, London.
K. Vetenskapsakad. Nobelinst., Medd.	Meddelanden från K. Vetenskapsakademiens Nobelinstitut. Wheldon & Wesley, Ltd., 2, 3 and 4, Arthur Street, London.
Kolloid Zeits.	Kolloid Zeitschrift. Theodor Steinkopff, Residenzstrasse 32, Dresden-Blasewitz, Germany.
Kyoto Coll. Eng., Mem.	Memoirs of the Kyoto Imperial University College of Engineering. Maruzen Co., Ltd., Kyoto, Japan.
Kyoto Coll. Sci., Mem.	Memoirs of the College of Science, Kyoto Imperial University. Maruzen Co., Ltd., Kyoto, Japan.
Kyushu Univ. Coll. Eng., Mem.	Memoirs of the College of Engineering, Kyushu Imperial University. Fukuoka, Japan.
Leeds Philosoph. and Lit. Soc., Proc.	Proceedings of the Leeds Philosophical and Literary Society. Chorley & Pickersgill, Ltd., Leeds, England.
Manchester Phil. Soc., Mem.	Memoirs and Proceedings of the Manchester Literary and Philosophical Society. 36, George Street, Manchester.
Mechanical Engineering	Mechanical Engineering. American Society of Mechanical Engineers, 29, West Thirty-ninth Street, New York, U.S.A.
Meteorolog. Office, Prof. Notes and Geophys., Mem.	Professional Notes and Geophysical Memoirs of the Meteorological Office. H.M. Stationery Office, Adastral House, Kingsway, London, W.C. 2.
M.V. Gazette	Metropolitan-Vickers Gazette. Metropolitan-Vickers Electrical Co., Ltd., Trafford Park, Manchester, England.
M.E.E.	Mining Electrical Engineer. Cromwell Buildings, Blackfriars Street, Manchester, England.
Monthly Weather Rev.	Monthly Weather Review. U.S. Department of Agriculture. Chief, U.S. Weather Bureau, Washington, D.C., U.S.A.
Nat. Acad. Sci., Proc.	Proceedings of the National Academy of Sciences. B and 21st Streets, Washington, D.C., U.S.A.
Nature	Nature. MacMillan & Co., Ltd., St. Martin's Street, London, W.C. 2.
New Zealand J. of Sci.	The New Zealand Journal of Science and Technology. W. A. G. Skinner, Government Printer, Wellington, New Zealand.
N. Cimento	Nuovo Cimento. N. Zanichelli, R. Istituto di Fisica, Bologna, Italy.
Observatory	The Observatory. Taylor & Francis, Red Lion Court, Fleet Street, London, E.C. 4.
Onde Élec.	L'Onde Électrique. Société des Amis de la T.S.F., 40, Rue de Seine, Paris.
Optical Soc., Trans.	Transactions of the Optical Society. 1, Lowther Gardens, Exhibition Road, South Kensington, London, S.W. 7.

Abbreviation.	Full Title and Publisher.
Phil. Mag.	The London, Edinburgh and Dublin Philosophical Magazine and Journal of Science. Taylor & Francis, Red Lion Court, Fleet Street, London, E.C. 4.
Phot. J.	The Photographic Journal. 35, Russell Square, London, W.C. 1.
Phys. Math. Soc. Japan, Proc.	Proceedings of the Physico-Mathematical Society of Japan. Faculty of Science, Tokyo Imperial University, Japan.
Phys. Rev.	The Physical Review. American Physical Society, 450, Ahnaip Street, Menaska, Wis., U.S.A.
Phys. Soc., Proc.	Proceedings of the Physical Society of London. Fleetway Press, Ltd., 3–9, Dane Street, High Holborn, London, W.C. 1.
Phys. Zeits.	Physikalische Zeitschrift. S. Hirzel, Königstrasse 2, Leipzig, C. 1, Germany.
P.O.E.E., J.	The Post Office Electrical Engineers' Journal. Electrical Review, Ltd., 4, Ludgate Hill, London, E.C. 4.
Power	Power. McGraw Hill Publishing Co., Inc., Tenth Avenue at 36th Street, New York, U.S.A.
Preuss. Akad. Wiss. Berlin, Ber.	Sitzungsberichte der Preussischen Akademie der Wissenschaften zu Berlin. 38, Unter den Linden, Berlin.
Q.S.T. Français	Q.S.T. Français et Radioélectricité. 53, Rue Réaumur, Paris (IIe).
Rev. de Mét.	Revue de Métallurgie. 5, Cité Pigalle, Paris.
Rev. d'Optique	Revue d'Optique Théorique et Instrumentale. Imprimerie Berger-Levrault, 18, Rue des Glacis, Nancy, France.
R.G.E.	Revue Générale de l'Électricité. 12, Place de Laborde, Paris (VIIIe).
Roy. Astron. Soc. Canada, J.	Journal of the Royal Astronomical Society of Canada. 198, College Street, Toronto, Canada.
Roy. Astron. Soc., M.N.	Monthly Notices of the Royal Astronomical Society. Burlington House, London, W. 1.
Roy. Dublin Soc., Proc.	The Scientific Proceedings of the Royal Dublin Society. Ballsbridge, Dublin, Ireland.
Roy. Inst., Proc.	Proceedings of the Royal Institution of Great Britain. 21, Albemarle Street, London, W. 1.
Roy. Irish Acad., Proc.	Proceedings of the Royal Irish Academy. Hodges, Figgis & Co., Dublin, Ireland.
Roy. Meteorolog. Soc., J.	Quarterly Journal of the Royal Meteorological Society. Edward Stanford, Ltd., 12, 13 and 14, Long Acre, London, W.C. 2.
Roy. Meteorolog. Soc., Mem.	Memoirs of the Royal Meteorological Society. Edward Stanford, Ltd., 12, 13 and 14, Long Acre, London, W.C. 2.
Roy. Soc. Arts, J.	Journal of the Royal Society of Arts. G. Bell & Sons, Ltd., York House, Portugal Street, London, W.C. 2.
Roy. Soc. Canada, Trans.	Transactions of the Royal Society of Canada. James Hope & Son, Ottawa, Canada.
Roy. Soc. Edinburgh, Proc.	Proceedings of the Royal Society of Edinburgh. Robert Grant & Son, 126, Princes Street, Edinburgh, Scotland.
Roy. Soc. Edinburgh., Trans.	Transactions of the Royal Society of Edinburgh. Robert Grant & Son, 126, Princes Street, Edinburgh, Scotland.
Roy. Soc., Phil. Trans.	Philosophical Transactions of the Royal Society of London. Harrison & Sons, Ltd., 44–47, St. Martin's Lane, London, W.C. 2.
Roy. Soc., Proc.	Proceedings of the Royal Society of London. Harrison & Sons, Ltd., 44–47, St. Martin's Lane, London, W.C. 2.

Abbreviation.	Full Title and Publisher.
Roy. Soc. Victoria, Proc.	Proceedings of the Royal Society of Victoria. Ford & Son, Drummond Street, Carlton, Melbourne, Australia.
Royal Techn. Coll., Glasgow, J. ..	Royal Technical College Journal. Robert Andersen, 142, West Nile Street, Glasgow, C. 1, Scotland.
Ryojun Coll. Eng., Mem.	Memoirs of the Ryojun College of Engineering.
S. African I.E.E., Trans.	The Transactions of the South African Institute of Electrical Engineers. P.O. Box 5907, Johannesburg, S. Africa.
Schweiz. Elektrot. Verein, Bull. (now: Assoc. Suisse Elect., Bull.)	Bulletin des Schweizerischen Elektrotechnischen Vereins. Association Suisse des Electriciens, Seefeldstrasse 301, Zürich 8, Switzerland.
Science	Science. Official organ of the American Association for the Advancement of Science. The Science Press, Grand Central Terminal, New York, U.S.A.
Siemens Zeits.	Siemens Zeitschrift. Siemenstadt, Berlin.
Soc. Belge Élect., Bull.	Bulletin de la Société Belge des Électriciens. Librairie Ramlot Frères et Sœur, 25, Rue Grétry, Brussels, Belgium.
Soc. Franç Élect., Bull.	Bulletin de la Société Française des Électriciens. 12 and 14, Rue de Staël, Paris, France.
T.F.T.	Telegraphen und Fernsprech Technik. R. Dietze, Regensburgerstrasse, 12A, Berlin, W. 50.
Terr. Mag.	Terrestrial Magnetism and Atmospheric Electricity. The Caxton Press, 420, Plum Street, Cincinnati, Ohio, U.S.A.
Tijds. Nederland. Radiogenootschap	Tijdschrift van het Nederlandsch Radiogenootschap, Amsterdam. 11a, Elzentlaan, Eindhoven, Holland.
Tohoku Math. J.	The Tohoku Mathematical Journal. Tohoku Imperial University, Sendai, Japan.
Tohoku Univ., Sci. or Technol. Reports	Scientific or Technology Reports of the Tohoku Imperial University. Maruzen Co., Ltd., Tokyo and Sendai, Japan.
Toyko Univ. Aeronaut Research Inst., Report	Report of the Aeronautical Research Institute, Tokyo Imperial University. Hukagawa, Tokyo, Japan.
Tokyo Univ. Earthquake Research Inst., Bull.	Bulletin of the Earthquake Research Institute, Tokyo Imperial University. Director of the Earthquake Research Institute, Tokyo Imperial University, Japan.
Union Obs. S. Africa, Circ.	Circular of the Union Observatory of S. Africa.
Univ. Nac. La Plata, Estudio Ciencias	Universidad Nacionale de La Plata. Contribucion al Estudio de las Ciencias. La Plata, Argentine.
*Univ. of Durham Phil. Soc., Proc.	Proceedings of the University of Durham Philosophical Society, Durham, England.
Univ. of Illinois Eng. Exp. Sta., Bull.	Bulletin of the Engineering Experiment Station of the University of Illinois. Urbana, Illinois, U.S.A.
V.D.I.	Zeitschrift des Vereines Deutscher Ingenieure. Dorotheenstrasse 40, Berlin, N.W. 7.
Washington Acad. Sci., J.	Journal of the Washington Academy of Sciences. Mt. Royal and Guilford Aves., Baltimore, Maryland, U.S.A.
Wireless World and Radio Rev. ..	Wireless World and Radio Review. Dorset House, Tudor Street, London, E.C. 4.
World Power	World Power. 62, Lincoln's Inn Fields, London, W.C. 2.
Zeits. f. angew. Math. u. Mechanik	Zeitschrift für angewandte Mathematik und Mechanik. Ingenieurwissenschaftliche Forschungsarbeiten. Verlag des Vereines Deutscher Ingenieure, Beuthstrasse 7, Berlin, S.W. 19.

Abbreviation.	Full Title and Publisher.
Zeits. f. Elektrochem.	Zeitschrift für Elektrochemie und angewandte physikalische Chemie. Dr. E. Müller, Verlag Chemie, Corneliusstrasse 3, Berlin, W. 10.
Zeits. f. Hochfrequenztechn.	Jahrbuch der Drahtlosen Telegraphie und Telephonie. Zeitschrift für Hochfrequenztechnik. M. Krayn, Genthinerstrasse 39, Berlin, W. 10.
Zeits. f. Instrumentenk.	Zeitschrift für Instrumentenkunde. J. Springer, Linkstrasse 23/24, Berlin, W. 9.
Zeits. f. Metallkunde	Zeitschrift für Metallkunde. V.D.I.-Verlag, G.m.b.H, Dorotheenstrasse 40, Berlin, N.W. 7.
Zeits. f. Physik	Zeitschrift für Physik. J. Springer, Linkstrasse 23/24, Berlin, W. 9.
Zeits. f. phys. Chem.	Zeitschrift für physikalische Chemie. Akademische Verlagsgesellschaft M.B.H. Leipzig, Germany.
Zeits. f. techn. Physik	Zeitschrift für technische Physik. J. A. Barth, Salomonstrasse 18B, Leipzig, Germany.
Zeits. f. Wiss. Phot.	Zeitschrift für wissenschaftliche Photographie, Photophysik und Photochemie. J. A. Barth, Salomonstrasse 18B, Leipzig, Germany.